

All exam answers are to be in simplest form. A scientific calculator may be used.  
No notes, no books, no homework may be used while taking this exam.  
Use blank spaces on the exam to show work. Attach all scratch paper to the exam.

Write a fraction to represent the shaded area of the figure.

1)



Write the fraction in simplest form.

- 2) Of the 154 students at a high school, 33 are sophomores.  
What fraction of the students are sophomores?

Write the fraction in simplest form.

3)  $\frac{30}{80}$

4)  $-\frac{247}{342}$

Determine whether the pair of fractions is equivalent.

5)  $\frac{5}{8}$  and  $\frac{40}{64}$

6)  $\frac{4}{5}$  and  $\frac{20}{70}$

Find the prime factorization of the number.

7) 126

8) 2200

Find the least common multiple (LCM) of the list of numbers.

9) 10, 45

Write the fraction as an equivalent fraction with the given denominator.

10)  $\frac{7}{11} = \frac{\quad}{55}$

11)  $\frac{2}{3} = \frac{\quad}{27}$

Perform the indicated operation. Simplify your answers.

12)  $\frac{3}{8} + \frac{3}{8}$

13)  $\frac{5}{21} - \frac{4}{21}$

14)  $-\frac{8}{27} - \frac{8}{27}$

15)  $-\frac{1}{7} \cdot \frac{1}{5}$

16)  $-\frac{5}{8} \cdot -\frac{5}{6}$

17)  $\frac{2}{3} \cdot \frac{1}{8} \cdot \frac{7}{8}$

18)  $1\frac{5}{9} \cdot 6\frac{3}{7}$

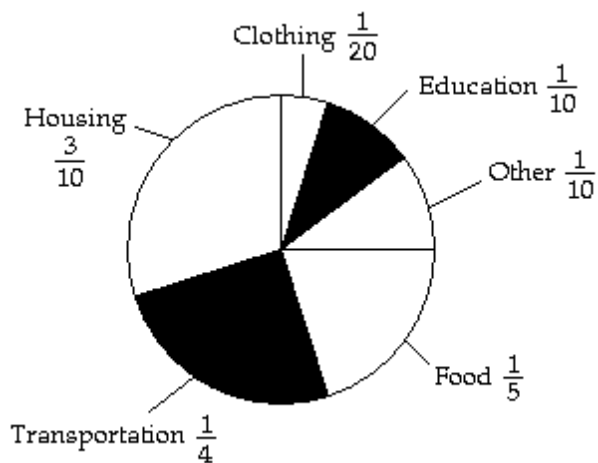
19)  $\frac{43}{8} \div \frac{1}{8}$

20)  $32 \div \frac{4}{3}$

21)  $2\frac{3}{5} \div \frac{1}{5}$

22)  $-\frac{4}{15} \div -\frac{8}{15}$

The circle graph below shows us how an average consumer spends money. Use this information to answer the question.



23) What fraction of spending goes for other and transportation combined?

24) What fraction of spending goes for clothing, transportation, and food?

- 25) Suppose your family spent \$54,000 on the items in the graph above. How much might we expect was spent on education?

**Perform the indicated operations. Round the result to the nearest thousandth if necessary.**

26)  $97.14 + 96.97 + 27.29$

27)  $-4.1 - 9.6$

28)  $3.8 - 4.3$

29)  $64.5 \times 5.6$

30)  $(-1.7) \div (-12.75)$

31) Subtract 0.0467 from 73

**Solve.**

- 32) Find the total monthly cost of owning and maintaining a car given the information shown.
- |                                     |          |
|-------------------------------------|----------|
| Monthly car payment:                | \$379.96 |
| Monthly insurance cost:             | \$62.10  |
| Average cost of gasoline per month: | \$45.90  |
| Average maintenance cost per month: | \$18.50  |

- 33) Mr. Davis grosses \$500 a week. If his take-home pay is \$407.59, how much money was deducted from his gross weekly pay?